

# 90 Degree Angle 165

P/N: 8100548

## Tool Features

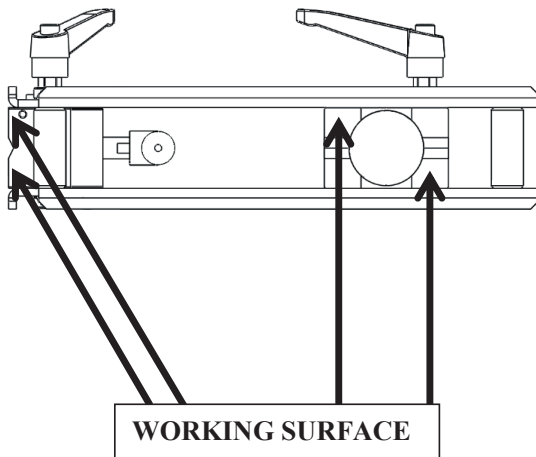
Magswitch 90 degree Welding Angles are the most versatile in the market. Featuring the benefits of Magswitch including incredible power and precision control, the Magswitch 90 degree angles are easy to use, and can be used with larger and heavier steel. All Magswitch 90 degree angles allow you to reposition the magnets up or down on each axis, or reverse from outside to inside. If you want more strength, just add more Magswitch MagSquares.



**WARNING!**  
DO NOT OPERATE UNLESS IN  
CONTACT WITH FERROUS TARGET

## Specifications

Max Breakaway *	150 lbs	68 kg
Full Saturation Thickness	0.25"	6 mm
2:1 Shear Working Load *	18.5 lbs	8.4 kg
Net Weight	1.8 lbs	0.8 kg
Overall Height	205 mm	
Magnetic Pole Footprint	48 mm x 31 mm	

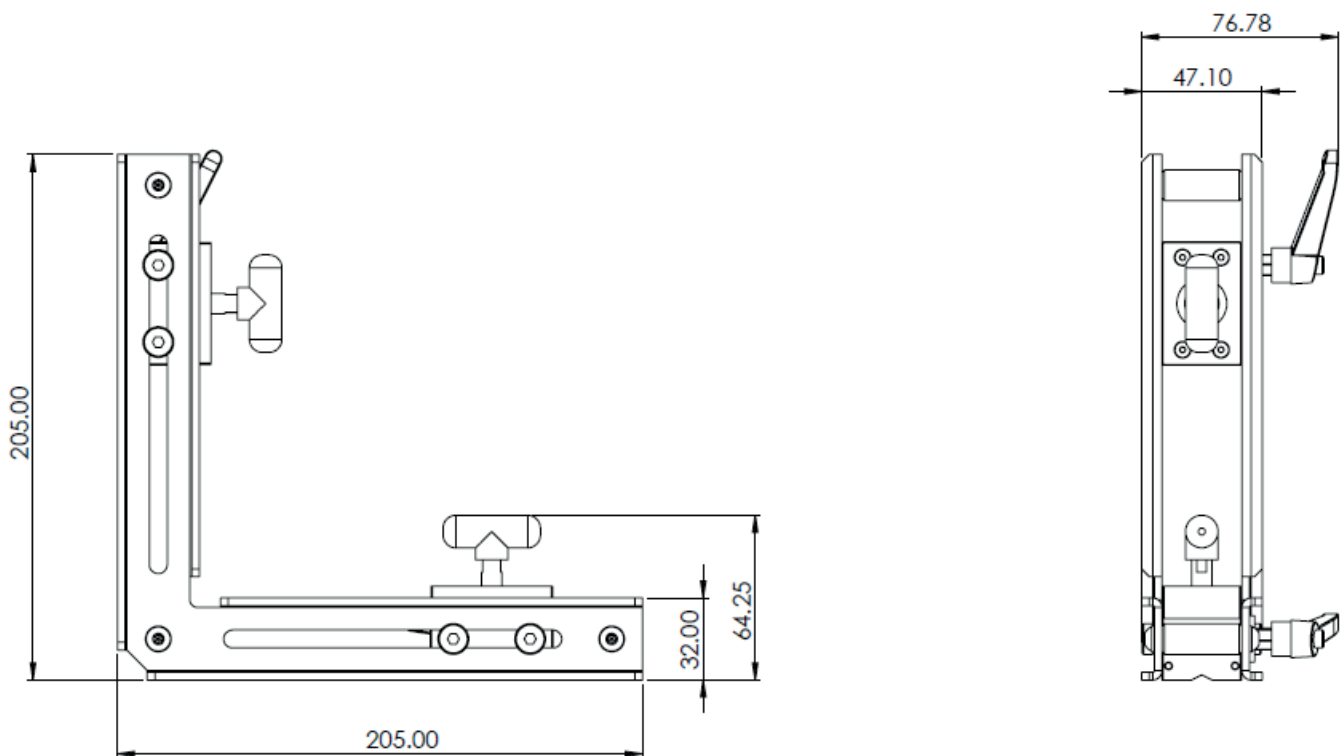


\* Max Breakaway determined in laboratory environment on 2" thick SAE1018 Steel with surface roughness 63 micro inches. Many factors contribute to the actual breakaway force in each application. Always test the magswitch in each application before deployment. Refer to the magswitch information booklet for more information.

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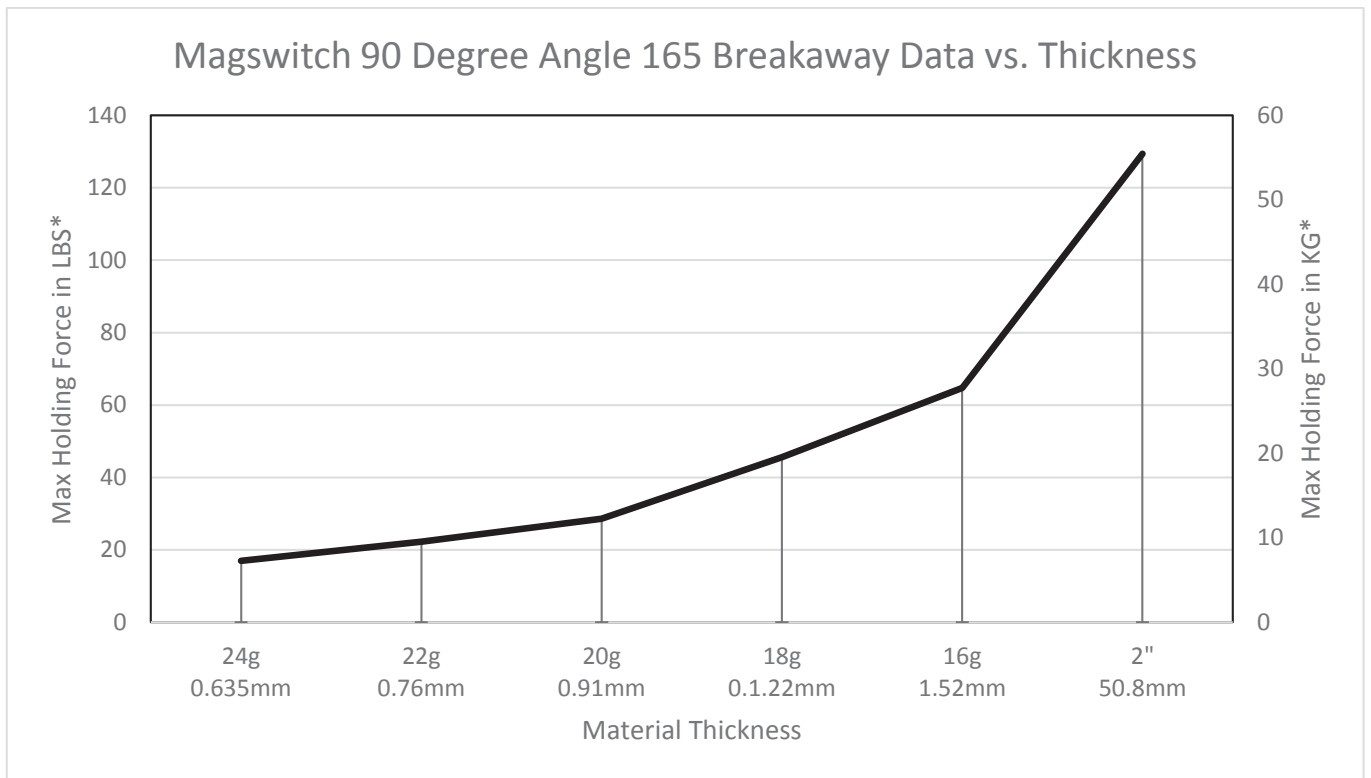
### Drawings



## 90 Degree Angle 165

P/N: 8100548

### Breakaway Data



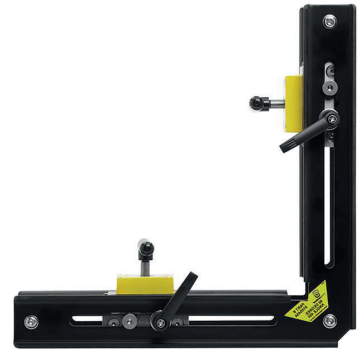
# 90 Degree Angle 400

P/N: 8100454

## Tool Features

Magswitch 90 Degree Angles are the most versatile in the market. Featuring the benefits of Magswitch including incredible power and precision control, the Magswitch 90 Degree Angles are easy to use, and can be used with larger and heavier steel. All Magswitch 90 Degree Angles allow you to reposition the magnets up or down on each axis or reverse from outside to inside. If you want more strength, just add more Magswitch MagSquares.

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## Specifications

<b>Maximum Breakaway Force</b> <sup>1,2,4</sup>	400 lbs		181 kg	
<b>Maximum Shear</b> <sup>1,2,4</sup>	20 lbs		9 kg	
<b>Full Saturation Thickness</b>	1/4 in		6.35 mm	
<b>Overall Height (Max)</b>	11.3 in		287.0 mm	
<b>Overall Length</b>	11.3 in		287.0 mm	
<b>Overall Width</b>	3.5 in		90.0 mm	
<b>Net Weight</b>	6.2 lbs		2.8 kg	
<b>Magnetic Pole Footprint</b>	2.5 x 1.6 in		64 x 41.26 mm	

<b>Material Thickness - mm (in)</b>	0.4 (0.016)	0.8 (0.031)	1.0 (0.039)	1.5 (0.059)	1.9 (0.075)	2.7 (0.106)	3.5 (0.138)	4.6 (0.181)	6.4 (0.250)	9.5 (0.375)	12.7 (0.500)
<b>Maximum Force <sup>4</sup> - kg (lbs)</b>	8.9 (20)	17.8 (39)	24.9 (55)	40.9 (90)	54.9 (121)	90.4 (199)	124.9 (275)	163.8 (361)	181.7 (401)	190.5 (420)	189.7 (418)

1. Determined in laboratory environment on 2" thick SAE1018 Steel with surface roughness 63 micro inches with optimized pole shoes. Many factors contribute to the actual breakaway force and safe working load in each application. Consult a Magswitch Applications Engineer and test the Magswitch in each application before deployment.

2. All data applies to unit with flat pole shoes installed.

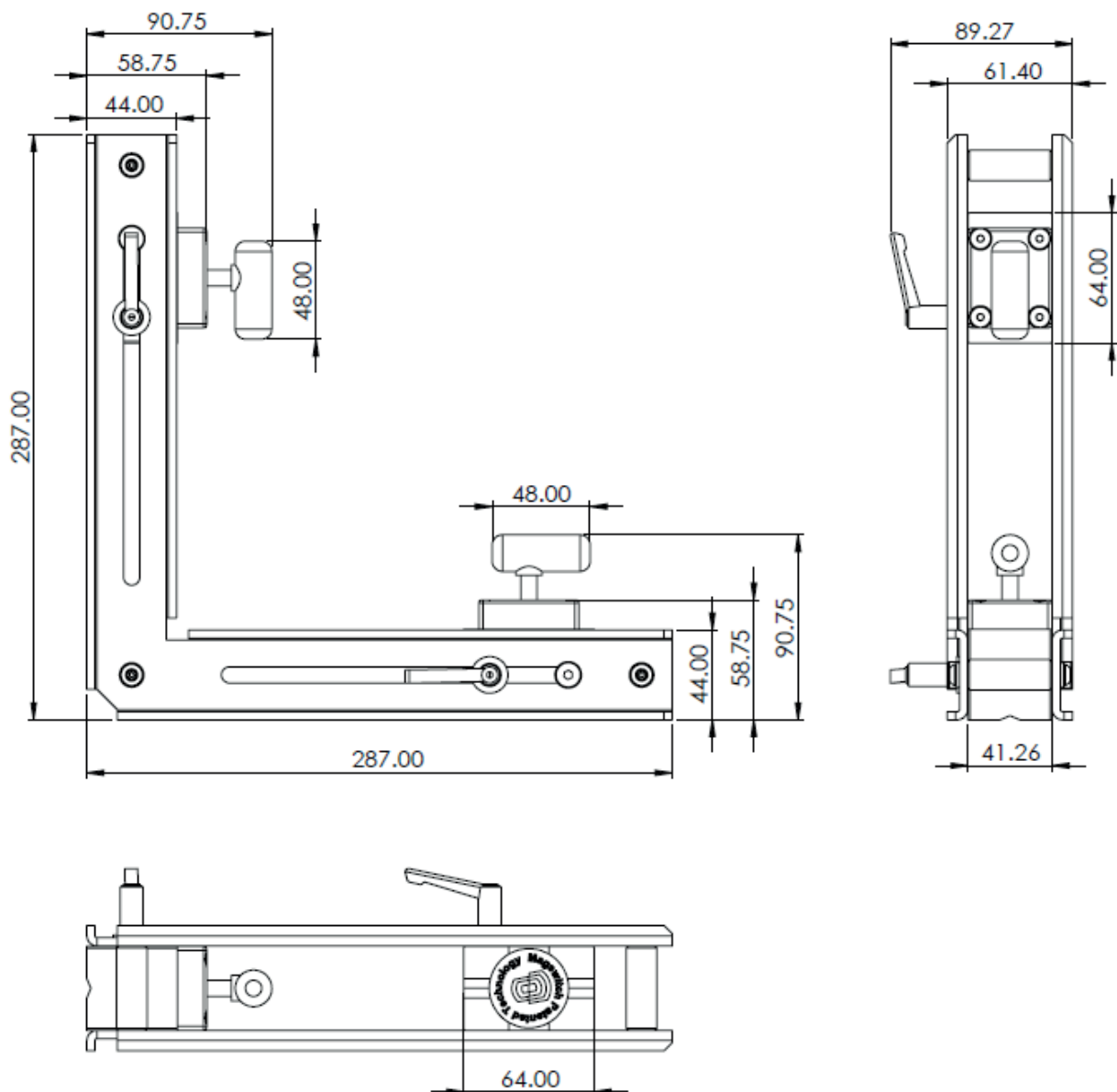
3. Values may vary by +/- 5%.

4. Maximum forces listed above are not safe lifting forces. Designer must take into account safety factor when specifying tool. Magswitch recommends SWL = 5:1 for most applications.

## 90 Degree Angle 400

P/N: 8100454

### Drawings



# 90 Degree Angle 600

P/N: 8100495

## Tool Features

Magswitch 90 Degree Angles are the most versatile in the market. Featuring the benefits of Magswitch including incredible power and precision control, the Magswitch 90 Degree Angles are easy to use, and can be used with larger and heavier steel. All Magswitch 90 Degree Angles allow you to reposition the magnets up or down on each axis or reverse from outside to inside. If you want more strength, just add more Magswitch MagSquares.

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## Specifications

Maximum Breakaway Force <sup>1,2,4</sup>	607 lbs		275.3 kg	
Maximum Shear <sup>1,2,4</sup>	61 lbs		27.7 kg	
Full Saturation Thickness	3/8 in		9.5 mm	
Overall Height (Max)	11.3 in		287.0 mm	
Overall Length	11.3 in		287.0 mm	
Overall Width	3.9 in		100.0 mm	
Net Weight	8.2 lbs		3.7 kg	
Magnetic Pole Footprint	3.0 x 2.0 in		75 x 51.5 mm	

Material Thickness - mm (in)	0.4 (0.016)	0.8 (0.031)	1.5 (0.059)	2.7 (0.106)	3.5 (0.138)	4.8 (0.187)	6.4 (0.250)	9.5 (0.374)	12.7 (0.500)	19.5 (0.768)	25.4 (1.000)
Maximum Force <sup>4</sup> - kg (lbs)	8.9 (20)	12.1 (27)	35.7 (79)	72.2 (159)	106.8 (236)	144.0 (317)	211.5 (466)	275.3 (607)	275.3 (607)	275.3 (607)	275.3 (607)

1. Determined in laboratory environment on 2" thick SAE1018 Steel with surface roughness 63 micro inches with optimized pole shoes. Many factors contribute to the actual breakaway force and safe working load in each application. Consult a Magswitch Applications Engineer and test the Magswitch in each application before deployment.

2. All data applies to unit with flat pole shoes installed.

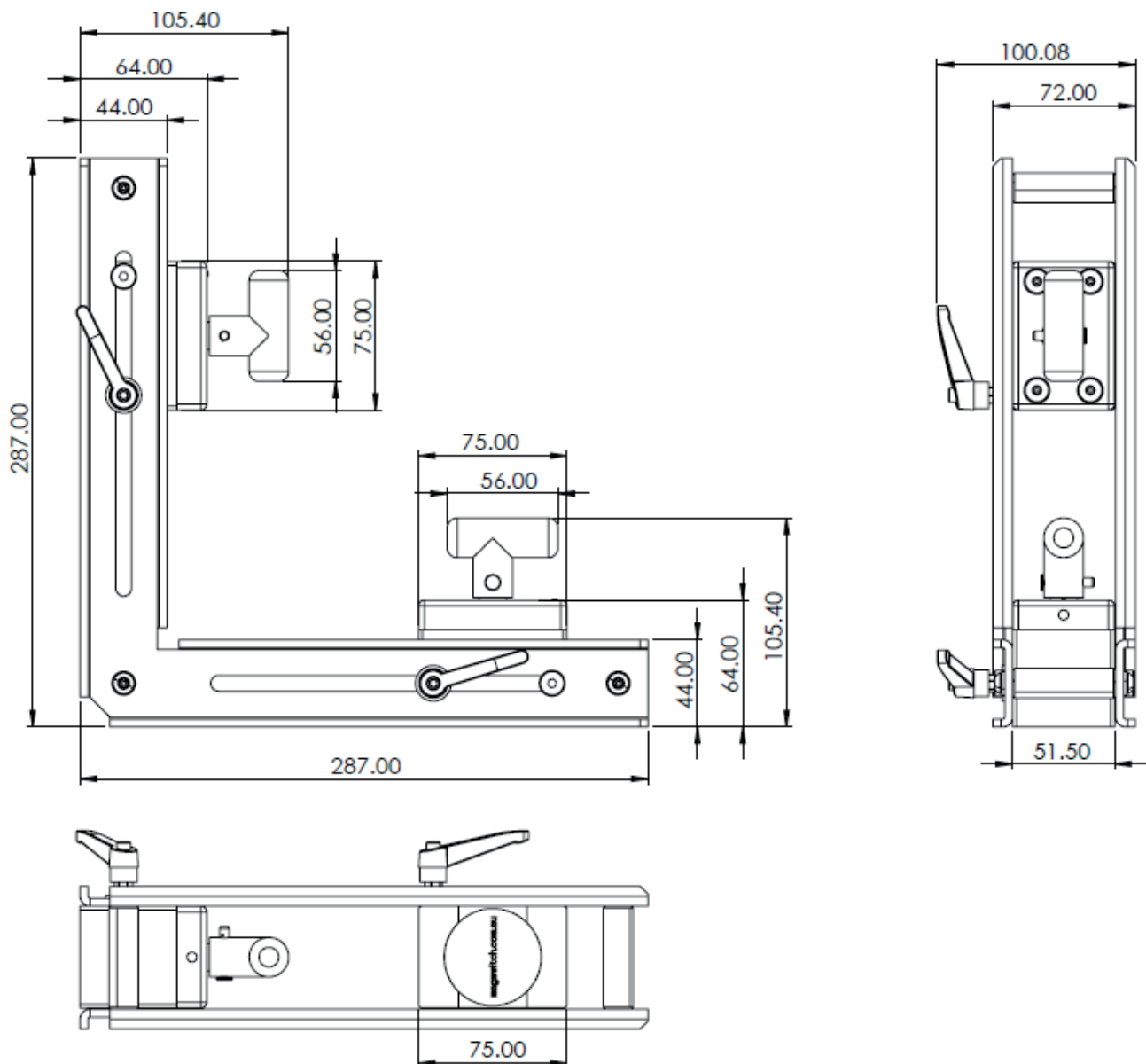
3. Values may vary by +/- 5%.

4. Maximum forces listed above are not safe lifting forces. Designer must take into account safety factor when specifying tool. Magswitch recommends SWL = 5:1 for most applications.

## 90 Degree Angle 600

P/N: 8100495

### Drawings



# 90 Degree Angle 1000

P/N: 8100503

## Tool Features

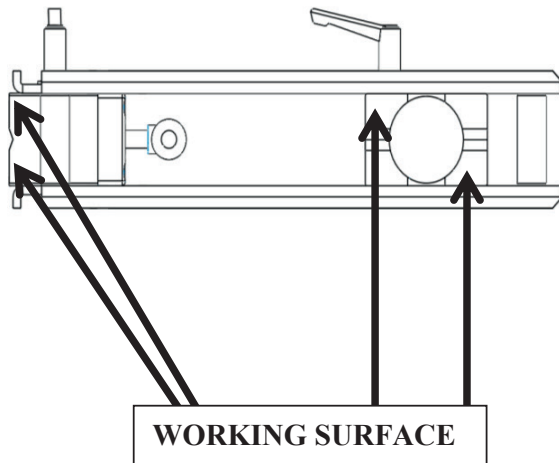
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## Specifications

Max Breakaway *	1000 lbs	454 kg
Full Saturation Thickness	0.5"	13 mm
2:1 Shear Working Load *	148 lbs	67 kg
Net Weight	10.2 lbs	4.6 kg
Overall Height	287 mm	
Magnetic Pole Footprint	72mm x 108mm	

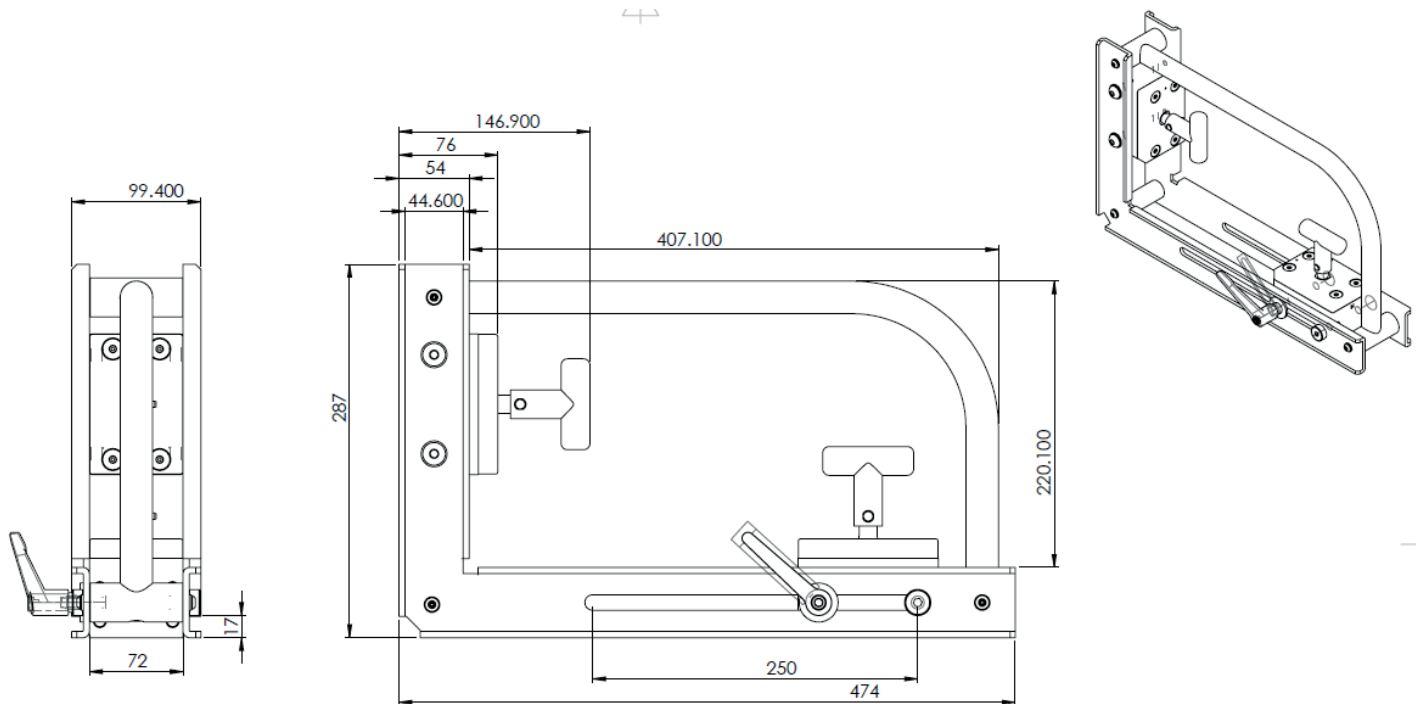


\* Max Breakaway determined in laboratory environment on 2" thick SAE1018 Steel with surface roughness 63 micro inches. Many factors contribute to the actual breakaway force in each application. Always test the magswitch in each application before deployment. Refer to the magswitch information booklet for more information.

# 90 Degree Angle 1000

P/N: 8100503

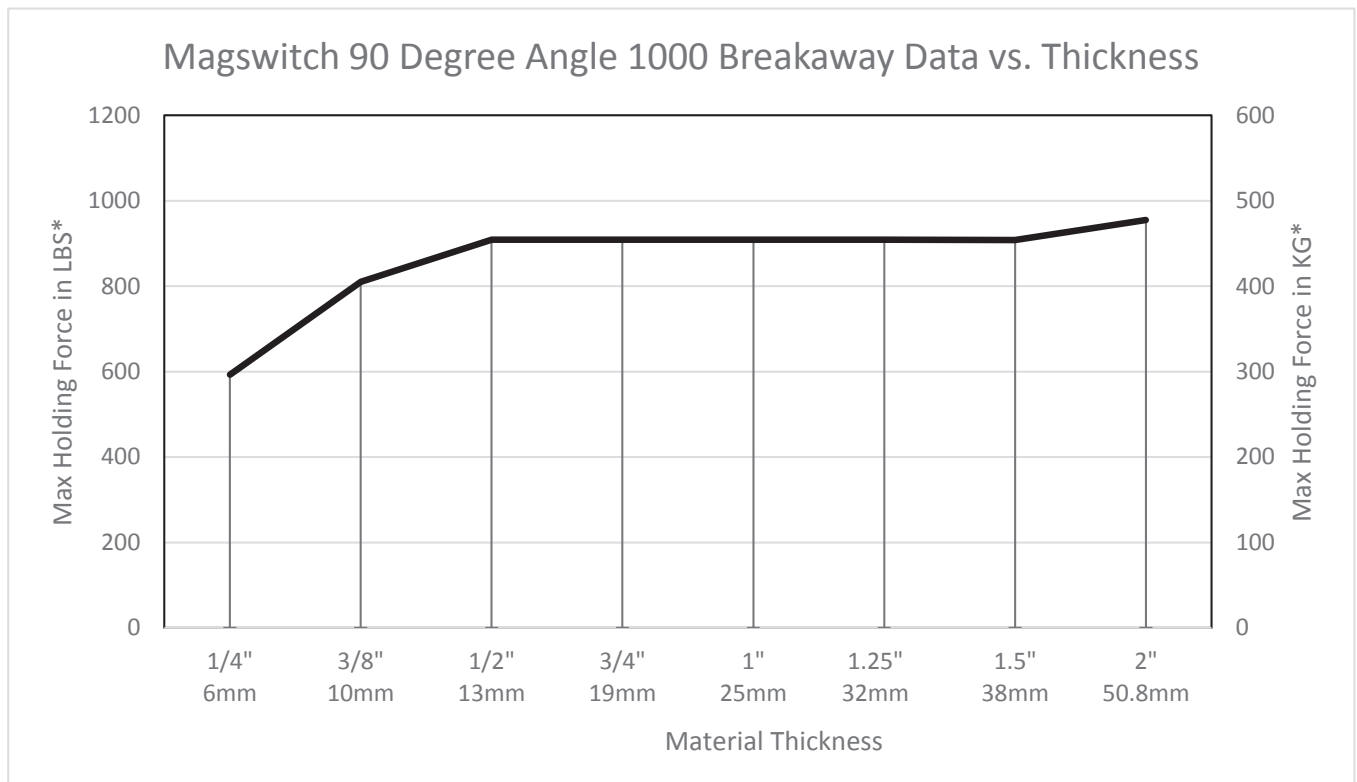
## Drawings



# 90 Degree Angle 1000

P/N: 8100503

## Breakaway Data



\* Max Breakaway determined in laboratory environment on 2" thick SAE1018 Steel with surface roughness 63 micro inches. Many factors contribute to the actual breakaway force in each application. Always test the magswitch in each application before deployment. Refer to the magswitch information booklet for more information.